What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. An information compression apparatus which compresses information and uses a DCT frequency conversion algorithm, comprising:

a plurality of block registers which store block based multi-bit quantized data converted from the information output from an quantization execution module;

a correction level register which presets a correction level indicating a degree of data correction;

a first control mechanism which controls so as to perform a scanning operation for scanning each block of the plurality of block registers and a search operation for searching a block having a valid coefficient; and

a data correction mechanism which corrects data to modify the valid coefficient of the block searched by the first control mechanism to an invalid coefficient based on the correction level started in the correction level register.

2. The information compression apparatus as defined in claim 1, wherein the valid coefficient is a coefficient having any coding amount except zero.

3. The information compression apparatus as defined in claim 1, wherein the scanning operation includes an

31

inverse zigzag operation.

4.   The information compression apparatus as defined
in claim 1, further comprising a second control device which
receives multi bit quantized data output from the quantized
execution module before the multi-bit quantized data is
transmitted to the plurality of block registers and causes
the first control mechanism to start the search operation.

5.   The information compression apparatus as defined
in claim 1, wherein the data correction device moves
addresses of an isolated valid coefficient searched instead
of modifying the valid coefficient to the invalid coefficient
when modifying the valid coefficient to the invalid
coefficient based on the correction level causes the
information deterioration to an extent exceeding a
predetermined limit so that the isolated valid coefficients
are consecutively arranged.

6.   The information compression apparatus as defined
in claim 1, further comprising a block register net which
comprises a plurality of logical OR circuits corresponding to
a plurality of frequencies used by the DCT frequency
conversion algorithm such that each of the plurality of
logical OR circuits outputs 1 when any one of the block
registers connected thereto has a valid coefficient, and

32

wherein the first control mechanism cancels its scanning
operation.

7.   The information compression apparatus as defined
in claim 6, wherein a number of the plurality of logical OR
circuits is equal to a number of the plurality of frequencies.

8.   The information compression apparatus as defined
in claim 6, wherein when a quantization table for quantizing
the plurality of block coefficients stored in registers is
relatively large, the plurality of logical OR circuits for a
high frequency side are connected to each other.

9.   The information compression apparatus as defined
in claim 1, wherein the apparatus uses a Huffman coding
method.

10.   The information compression apparatus as defined
in claim 1, wherein the apparatus uses a JPEG coding method.

11. The information compression apparatus as defined
in claim 1, wherein the apparatus uses a sound data coding
method.

12.   An information compression apparatus which
compresses information and uses a DCT frequency conversion

33

algorithm, comprising:

a plurality of block register means for storing block based multi-bit quantized data converted from the information output from an quantization execution module means;

5   a correction level register means for presetting a correction level indicating a degree of data correction;

a first control means for controlling so as to perform a scanning operation for scanning each block of the plurality of block register means and a search operation for searching

10   a block having a valid coefficient; and

a data correction means for correcting data to modify the valid coefficient of the block searched by the first control means to an invalid coefficient based on the correction level started in the correction level register

15   means.

13.   The information compression apparatus as defined in claim 12, wherein the valid coefficient is a coefficient having any coding amount except 0.

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14.   The information compression apparatus as defined in claim 12, wherein the scanning operation includes an inverse zigzag operation.

25   15.   The information compression apparatus as defined in claim 12, further comprising a second control means for

receiving multi-bit quantized data output from the quantized

execution module means before the multi-bit quantized data is

transmitted to the plurality of block register means and

causing the first control means to start the search operation.

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16.   The information compression apparatus as defined

in claim 12, wherein the data correction means moves

addresses of an isolated valid coefficient searched instead

of modifying the valid coefficient to the invalid coefficient

10   when modifying the valid coefficient to the invalid

coefficient based on the correction level causes the

information deterioration to an extent exceeding a

predetermined limit so that the isolated valid coefficients

are consecutively arranged.

15

17.   The information compression apparatus as defined

in claim 12, further comprising a block register net means

for comprising a plurality of logical OR circuit means

corresponding to a plurality of frequencies used by the DCT

20   frequency conversion algorithm such that each of the

plurality of logical OR circuit means outputs 1 when any one

of the block register means connected thereto has a valid

coefficient, and wherein the first control means cancels its

scanning operation.

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18.   The information compression apparatus as defined

35

in claim 17, wherein a number of the plurality of logical OR circuit means is equal to a number of the plurality of frequencies.

5   19.   The information compression apparatus as defined in claim 17, wherein when a quantization table for quantizing the plurality of block coefficients stored in register means is relatively large, the plurality of logical OR circuit means for a high frequency side are connected to each other.

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20.   The information compression apparatus as defined in claim 12, wherein the apparatus uses a Huffman coding method.

15   21.   The information compression apparatus as defined in claim 12, wherein the apparatus uses a JPEG coding method.

22.   The information compression apparatus as defined in claim 12, wherein the apparatus uses a sound data coding

20 method.

23.   An information compression method for compressing information and using a DCT frequency conversion algorithm, comprising the steps of:

25   presetting a predetermined correction level indicating a degree of data correction;

latching quantized data including valid coefficients and invalid coefficients into a block register;

performing an inverse zigzag scan for scanning the block register to search a valid coefficient;

5   modifying an initially searched valid coefficient to an invalid coefficient;

counting a number of searched valid coefficients;

modifying a subsequent searched valid coefficient to the invalid coefficient;

10   incrementing the number of valid coefficients by one;

continuously performing the inverse zigzag scan when the number of searched coefficients counted in the counting step is smaller than the collection level in the presetting step; and

15   transferring the data of the block register to a coding module when the correction counter value reaches the correction level.

24.   The information compression method as defined in

20   claim 23, wherein when a valid coefficient is modified to an invalid coefficient in the modifying steps, valid coefficients smaller than a predetermined threshold value are deleted.

25   25.   The information compression method as defined in claim 23, further comprising a presearching step for

37

searching quantized data output from the quantization
execution module before the search step.

26. The information compression method as defined in
claim 23, further comprising an address moving step for
moving addresses of isolated valid coefficients searched such
that the isolated valid coefficients are consecutively
arranged when the information deterioration to an extent
exceeds a predetermined limit in the modifying steps, and
wherein the modifying the steps are canceled instead.

27. The information compression method as defined in
claim 23, further comprising a calculating step for
calculating a total sum of coefficients of block registers
arranged along each scanning line corresponding to one of
different frequencies used in the DCT frequency conversion
algorithm, and a start address changing step for changing an
address of the block register to start the inverse zigzag
scan.

28. The information compression method as defined in
claim 27, further comprising a summing up step for summing up
a plurality of the total sums calculating by calculating step
to execute code calculation at an appropriate part of the
block register.

38

29. A program of an information compression causing a computer to execute an information compression operation using a DCT frequency conversion algorithm according to a method comprising the steps of:

presetting a predetermined correction level indicating a degree of data correction;

latching quantized data including valid coefficients and invalid coefficients into a block register;

performing an inverse zigzag scan for scanning the block register to search a valid coefficient;

modifying an initially searched valid coefficient to an invalid coefficient;

counting a number of searched valid coefficients;

modifying a subsequent searched valid coefficient to the invalid coefficient;

incrementing the number of valid coefficients by one;

continuously performing the inverse zigzag scan when the number of searched coefficients counted in the counting step is smaller than the collection level in the presetting step; and

transferring the data of the block register to a coding module when the correction counter value reaches the correction level.

30. The program of an information compression as defined in claim 29, wherein when a valid coefficient is

39

modified to an invalid coefficient in the modifying steps,
valid coefficients smaller than a predetermined threshold
value are deleted.

5   31.   The program of an information compression as
defined in claim 29, further comprising a presearching step
for searching quantized data output from the quantization
execution module before the search step.

10   32.   The program of an information compression as
defined in claim 29, further comprising an address moving
step for moving addresses of isolated valid coefficients
searched such that the isolated valid coefficients are
consecutively arranged when the information deterioration to
15 an extent exceeds a predetermined limit in the modifying
steps, and wherein the modifying the steps are canceled
instead.

       33.   The program of an information compression as
20 defined in claim 29, further comprising a calculating step
for calculating a total sum of coefficients of block
registers arranged along each scanning line corresponding to
one of different frequencies used in the DCT frequency
conversion algorithm, and a start address changing step for
25 changing an address of the block register to start the
inverse zigzag scan.

34. The information compression method as defined in claim 33, further comprising a summing up step for summing up a plurality of the total sums calculating by calculating step

5   to execute code calculation at an appropriate part of the block register.

35. A program of an information compression causing a computer using a JPEG coding method to execute an information

10 compression operation according to a method comprising the steps of:

presetting a predetermined correction level indicating a degree of data correction;

latching quantized data including valid coefficients

15 and invalid coefficients into a block register;

performing an inverse zigzag scan for scanning the block register to search a valid coefficient;

modifying an initially searched valid coefficient to an invalid coefficient;

20   counting a number of searched valid coefficients;

modifying a subsequent searched valid coefficient to the invalid coefficient;

incrementing the number of valid coefficients by one;

continuously performing the inverse zigzag scan when

25 the number of searched coefficients counted in the counting step is smaller than the collection level in the presetting

41

step; and

transferring the data of the block register to a coding module when the correction counter value reaches the correction level.

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36.   A program of an information compression causing a computer using a sound data coding method to execute an information compression operation according to a method comprising the steps of:

10   presetting a predetermined correction level indicating a degree of data correction;

latching quantized data including valid coefficients and invalid coefficients into a block register;

performing an inverse zigzag scan for scanning the

15   block register to search a valid coefficient;

modifying an initially searched valid coefficient to an invalid coefficient;

counting a number of searched valid coefficients;

modifying a subsequent searched valid coefficient to

20   the invalid coefficient;

incrementing the number of valid coefficients by one;

continuously performing the inverse zigzag scan when the number of searched coefficients counted in the counting step is smaller than the collection level in the presetting

25   step; and

transferring the data of the block register to a coding

module when the correction counter value reaches the
correction level.

37. A computer-readable media storing a program of an
information compression causing a computer to execute an
information compression operation using a DCT frequency
conversion algorithm according to a method comprising the
steps of:

presetting a predetermined correction level indicating
a degree of data correction;

latching quantized data including valid coefficients
and invalid coefficients into a block register;

performing an inverse zigzag scan for scanning the
block register to search a valid coefficient;

modifying an initially searched valid coefficient to an
invalid coefficient;

counting a number of searched valid coefficients;

modifying a subsequent searched valid coefficient to
the invalid coefficient;

incrementing the number of valid coefficients by one;

continuously performing the inverse zigzag scan when
the number of searched coefficients counted in the counting
step is smaller than the collection level in the presetting
step; and

transferring the data of the block register to a coding
module when the correction counter value reaches the

correction level.